

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



a TS/577  
A3452

U.S. DEPT. OF AGRICULTURE  
NAT'L AGRIC. LIBRARY  
RECEIVED

REPORT NO. 11

JAN 25 '74

PROCUREMENT SECTION  
CURRENT SERIAL RECORDS

## Cotton Fiber and Processing Test Results

CROP of

1971



Consumer and Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38117 January 7, 1972

This is the eleventh of a series of reports of fiber and processing test results from the 1971 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, Crop of 1970", March 1971. These reports are published by the Standardization Section, Cotton Division, Consumer and Marketing Service, U. S. Department of Agriculture, P. O. Box 17723, Memphis, TN 38117.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1971

Discussion of Test Results

Cotton testing laboratories of the Consumer and Marketing Service, USDA, report that fibers from Southwestern short staple samples tested, to date, are weaker than through the same period a year ago. Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are weaker and show more imperfections. Average spinning potential yarn number is lower than last season.

Averages for all medium staple samples tested through December 31, 1971 show longer fibers than a year ago. Zero gage fiber strength is lower. Yarns spun from these samples show higher appearance grades.

Medium staple samples from the Southeast are weaker than a year ago. Yarns spun from these samples are weaker with higher appearance grades and more imperfections.

South Central medium staple samples are longer and finer than last season. Yarns spun from these samples show higher appearance grades.

Medium staple samples from the Southwest are weaker at 1/8-inch gage fiber strength than a year ago. Yarns spun from these samples show higher appearance grades and fewer imperfections. Average spinning potential yarn number is lower than a year ago.

Medium staple samples from the West are longer than last year. Yarns spun from these samples show higher appearance grades.

Averages for all long staple samples tested, not including roller ginned, are weaker than through the same period a year ago. Picker and card waste and comber waste are higher than last season. Yarns spun from these samples are weaker with higher appearance grades and fewer imperfections.

No additional Southeast or South Central long staple samples were received during this report period.

Long staple samples from the West are shorter and weaker at 1/8-inch fiber strength than last season. Shirley Analyzer nonlint content is lower. Yarns spun from these samples are weaker with higher appearance grades and fewer imperfections. Average spinning potential yarn number is higher than last season.

No additional American Pima extra long staple samples were received during this report period.

Extra long staple, American Pima, samples from the West are shorter and weaker than last season. Shirley Analyzer nonlint content is lower while picker and card waste is higher. Yarns spun from these samples are weaker than last year.

Table 1--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 31, 1971

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results						
		Fibrograph		Mike fine- ness		Fiber strength		S A nonlint		P & C waste		Yarn quality		Spin. Potent.
		2.5% span	50/2.5 unif.	Zero gage	1/8" gage	G/tex	Mpsi	Rdg.	Pct.	Skein str.	Index	Imperf- ections	No.	
Short Staple:														
Southwest														
1970	52	0.94	46	4.4	86	21	3.3	6.0	92	114	29	44		
1971	34	0.95	45	4.3	80	20	4.2	7.0	85	115	36	37		
Medium Staple:														
Southeast														
1970	83	1.07	45	4.4	83	23	3.6	6.7	102	101	18	60		
1971	67	1.08	45	4.4	79	22	3.4	6.6	99	109	20	61		
South Central														
1970	161	1.08	45	4.5	82	22	3.2	6.2	101	107	21	61		
1971	142	1.10	44	4.3	81	22	3.0	5.9	103	112	20	62		
Southwest														
1970	61	1.07	46	4.3	86	23	3.2	6.2	105	114	28	63		
1971	31	1.06	45	4.4	85	22	3.3	5.9	102	120	22	58		
West														
1970	61	1.10	45	4.2	92	25	2.7	5.5	117	114	24	69		
1971	60	1.12	45	4.2	92	25	2.7	5.3	121	120	24	70		
U. S. Average														
1970	366	1.08	45	4.4	85	23	3.2	6.2	105	108	22	62		
1971	300	1.10	45	4.3	83	23	3.1	5.9	106	114	21	63		
Significant difference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3		

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States

through December 31, 1971

1/ (continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results					
		Length		Mike Span	Mike Unif	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality		SPY
		In.	Pct.			Rdg.	Mpsi				Pct.	Pct.	
Long Staple: Southeast	No.												
1970	14	1.14	45	4.7	82	23	4.5	8.6	18.5	109	122	103	100
1971	16	1.14	43	4.3	79	22	4.2	9.7	17.2	102	118	109	118
South Central													
1970	6	1.16	42	4.6	85	24	4.5	9.2	20.0	102	124	93	115
1971	3	1.22	43	4.5	83	24	5.3	9.6	16.4	113	130	107	117
West													
1970	20	1.18	45	3.7	92	27	3.5	8.2	16.0	134	152	86	94
1971	11	1.16	44	3.6	92	26	2.3	8.5	16.1	129	146	99	104
U. S. Average													
1970	40	1.16	45	4.2	87	25	4.0	8.5	17.5	120	137	93	99
1971	30	1.16	43	4.1	84	24	3.6	9.2	16.7	113	129	105	113
Array													
American Upland													
Extra Long Staple:													
West													
1970	2	1.42	32	3.8	111	36	2.6	7.7	18.8	71	105	7	
1971	2	1.41	30	4.0	105	30	2.0	8.2	16.0	66	100	100	10
American Pima													
West													
1970	16	1.48	31	3.7	99	34	3.4	7.7	17.8	70	111	4	
1971	19	1.45	31	3.8	98	33	2.7	8.4	17.5	65	113	3	
Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2

1/ Based on a limited number of samples of modal quality  
 2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number		Fiber Test Results										Processing Test Results - Carded Yarns									
		Digital Fibrigraph	Mike	Fiber Strength	Elong- at'n 1/8"	S.A. Non- lint	Color Raw Stock	P & C Waste	Strength	Elongation	Appearance Index	Imperfect'ns	Spin. Potential								
No	Grade	2.5% span	Unif span	Zero Gage	1/8" Gage	G/tex	Mpsi	Rdg	Pct	Pct	No	No	No	No	No	No	No	No	No	No	
SOUTHWEST NORTHWEST TEXAS																					
COTTON CENTER	2 LM	511/	30	0.95	43	3.2	81	20	6.8	3.8	2	3	85 PERCENT	81	6.7	5.9	120	110	78	41	41
LAMESA	1 MID LT SP	32	30	0.91	45	3.6	76	20	6.7	3.0	2	3	75 PERCENT	81	7.7	6.6	120	120	50	36	35
LOCKNEY	2 SLM LT SP	422/	30	0.98	42	2.9	79	21	6.9	4.7	2	4	75 PERCENT	85	7.2	6.2	110	100	97	60	37
MULESHOE	~ 2 LM LT SP	523/	30	0.95	47	2.8	82	22	6.6	4.7	3	4	80 PERCENT	85	7.2	6.1	120	110	94	48	35
RULE	2 LM LT SP	523/	33	1.05	43	4.1	74	20	7.1	6.6	3	4	100 PERCENT	84	7.1	6.0	120	100	86	58	45
NEW MEXICO																					
CAUSEY	1 LM LT SP	523/	30	0.85	45	3.0	83	19	6.3	6.0	3	4	75 PERCENT	84	6.8	5.7	120	120	75	31	
PORTALES	~ 2 LM LT SP	523/	30	0.83	45	2.7	85	20	6.2	7.8	3	3	80 PERCENT	86	6.5	5.9	110	100	111	66	33

1/ Reduced from 41 because of bark  
 2/ Reduced from 32 because of bark  
 3/ Reduced from 42 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number				Fiber Test Results						Processing Test Results - Carded Yarns										
No	Grade	Name & Code	Staple span	Digital Fibrograph 2.5% Unif.	Mike	Fiber Strength Zero Gage	Elongat'n 1/8"	S.A. Non-Lint	Color Raw Stock	P & C Waste	Strength 22s or 50s or 27 tx	Elongation 22s or 50s or 27 tx	Appearance Index 22s or 50s or 27 tx	Imperfect's 22s or 50s or 27 tx	Spin. Potential No					
32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	Pct	Lbs	Pct	Pct	No	No	No					
<b>SOUTH CENTRAL LOUISIANA</b>																				
SHREVEPORT	41	34	1.10	41	2.8	78	23	DELTA PINE 16	2.6	2	100 PERCENT	38	7.4	5.1	70	60	70	59	64	
<b>SOUTHWEST TEXAS</b>																				
LUBBOCK	42	31	0.97	43	3.3	80	21	PAYMASTER 111	4.7	3	75 PERCENT	30	5.9	4.1	110	80	58	35	49	
1 SLM LT SP	52L/	31	0.94	45	3.0	82	22	PAYMASTER 111	5.0	3	80 PERCENT	27	5.5	3.4	120	90	34	26	48	
O'DONNELL	1 IM LT SP	52L/	33	1.05	42	3.0	78	COKER 4104	4.8	3	100 PERCENT	36	6.9	4.8	120	80	46	37	56	
SLATON	2 IM LT SP																			
<b>WEST ARIZONA</b>																				
SAFFORD	3 MID LT SP	32	35	1.09	42	3.4	79	22	DELTA PINE 16	3.5	2	100 PERCENT*	33	6.6	4.9	120	90	44	32	61

\* 100 percent selected for tests, less than 100 percent in the area

1/Reduced from 42 because of bark

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number		Fiber Test Results						Processing Test Results - Carded Yarns						
		Digital Fibrograph		Fiber Strength		S.A. Non- Lint 1/8"		P & C Comber and Waste		Elongation		Appearance Index		Spin. Poten- tial
No	Grade	Staple	2.5% span	Unif.	Mike Gage	Zero Gage	Gage	Raw Stock Yel Gra	22s or 50s or 27 tx	No				
32s	In	Pet	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	No	No	No
LESTERIAN														
NFW (MEXICO)														
ARTESIA	41	36	1.12	42	2.7	89	ACALA 1517V	5.5	3.3	1	3 10.4 PERCENT 1/	50	7.0	80
SLM	3										13.1			
											5.8			
											7.1			
											15.1			
											* 19.5			
												90		
												70		
												29		
												25		
													4.8	4.3
														81

\* Comber Waste and Combed Yarn Data  
 1/ 100 percent selected for tests, less than 100 percent in the area

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1971

Production Area, Classification & Sample Number				Fiber Test Results						Processing Test Results - Combed Yarns							
No	Grade	Stple	Name & Code	Array Length	Mike CV	Fiber Strength	Elong- at'n 1/8"	S.A. Non- Lint	Color Raw Stock	P & C Waste	Comber Waste	Strength	Elongation	Appearance Index	Imperfect's ns		
32s	In	Pct	Reg	Reg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No
<b>WESTERN</b>																	
ARIZONA																	
CASA GRANDE	3	44	1.48	30	3.6	98	34	6.5	2.1	3	5	7.7	17.4	63	37	5.2	110
CASA GRANDE	4	44	1.48	30	3.8	99	33	6.8	3.5	4	5	9.7	18.5	67	38	5.7	110
SAFFORD	4	46	1.52	29	3.8	101	35	7.0	2.1	4	5	7.7	14.8	65	37	6.1	110
<b>WEST TEXAS</b>																	
EL PASO	4	44	1.41	33	3.6	98	33	7.4	3.5	5	6	8.5	17.4	63	36	6.0	100
EL PASO	4	44	1.38	33	4.1	97	34	7.0	2.4	5	6	8.1	18.4	63	35	5.7	100
PECOS	4	44	1.39	37	3.3	95	34	6.6	3.2	5	7	9.6	20.6	59	33	5.7	100

\* 100 percent selected for tests, less than 100 percent in the area

